

REMARKS

Reconsideration of this application is respectfully requested.

The drawings were objected to under 37 CFR 1.83(a) because they fail to show Item 22 as described in the specification. Also, the disclosure was objected to because of several informalities. Applicant has corrected both of these objectionable elements, with submission of a replacement drawing sheet and amendments to the specification, and thus believes those objections to have been overcome.

Claims 1-4 were rejected under 35 U.S.C. 103(a) as being unpatentable over Stirm (US 5,071,069) in view of Hummel (DE 4022073) or Schmidt (DE 4241804 A1). Claims 5-10 were rejected under 35 U.S.C. 103(a) as being unpatentable over King (US Patent No. 3,341,081) in view of Hummel or Schmidt and further in view of Erickson (US Patent No. 4,851,017). The examiner states as follows:

Stirm discloses a pressure cleaner having an improved cooling fan mechanism with a drive gear (pulley) rotatably mounted within the pressure washer and the pulley is driven by a motor (Fig. 2,3, Items 17, 16, 2). Stirm also discloses a fan with blades attached to the motor which forces air through the motor in order to cool the motor (Fig. 2, Item 5). Stirm does not specifically disclose the fan integral with the pulley mechanism. However, Hummel or Schmidt teaches fan blades inside the rims of the pulleys (abstract, Fig. 1; abstract, Fig. 3, respectively). Stirm, Hummel or Schmidt also discloses the fan blades being angled shown in the drawings or specifications. The design of fan blades is well known and one of ordinary skill in the art would readily foresee using a common angled fan blade in the design, especially in Schmidt where angled fan blades with curvature are clearly shown in Figure 3. At the time of the invention, it would have been obvious to one of ordinary skill in the art to modify Stirm with Hummel or Schmidt for the benefit of a more compact, simplistic design for cooling the motor.

King discloses a spraying apparatus having a motor, pulley, water pump, drive belt and a housing enclosing the structure (See Fig. 1). King does not specifically disclose the drive pulley including a cooling fan mechanism. Hummel and Schmidt both disclose fan blades inside of a drive pulley (see Abstract and Fig. 1 (Schmidt), Fig. 2, 3 (Hummel)). King also does not specifically describe air inlets and air outlets. However, Erickson discloses a fan cooling a motor and the air inlets and outlets (Fig. 1, air flow indicated by arrows). At the time of the invention, it would have been obvious to one of ordinary skill in the art to modify King with Hummel or Schmidt (see abstracts and figures) and also with Erickson (col. 1, ll. 45-55) for the benefit of a more compact and simplistic design and also for the benefit of quickly cooling the motor.

Applicants have amended independent claims 1 and 5 and dependent claims 6 and 7 to more

1 distinctly claim those features of their invention which are unique and novel over the prior art.

2 Specifically, applicants have amended claims 1 and 5 to further state that the

3 "angled fan blades [are] operative to draw air external to the pressure washer through
4 said drive pulley from said outer side of said outer rim to said inner side of said outer
rim to force the engaged air into the pressure washer via said fan blades"

5 Claim 5 has been further amended to state that

6 "said drive belt extending around said outer rim of said drive pulley"

7 Applicants have made these changes to point out to the examiner that the present invention
8 includes features which are patentable, particularly over the cited patents. Applicants respectfully
9 disagree with the examiner's stated arguments in respect to claim 1, as the Stirm invention shows a
10 pressure washer with an internal fan structure that does not operate as does applicants' invention,
11 specifically that the fan, as stated by the examiner, is not integral with the pulley mechanism.
12 Instead, Stirm discloses a separate rotary fan which engages air held within the housing and directs
13 the air into a radiator structure which conducts a heat exchange with fluid passing therethrough, the
14 air then contacting the motor. The examiner suggests that modifying Stirm to utilize the fan blade
15 structure integrally formed with the drive pulley as shown in either of the German patents would
16 have been obvious to one skilled in the art. In fact, contrary to the examiner's stated position, were
17 one to modify the Stirm invention to include the fan structure of either German patent, the
18 functionality of the Stirm invention would be destroyed. It is a critical feature of Stirm that the
19 motor be housed in an air tight and water tight housing which does not permit external air to enter
20 for cooling, hence the need for the radiator structure in Stirm. Were the Stirm invention to be
21 modified as proposed by the examiner, the drive belt would need to extend out of the air-tight
22 housing for the motor, and thus the fluid-tight integrity of the motor housing of Stirm would be
23 compromised. Stirm would thus no longer be functional for its intended purpose, which clearly
24 would be against the teachings of Stirm.

25 As the modification to Stirm to include the fan integral with the pulley mechanism would
26 destroy the functionality of Stirm, such a modification clearly cannot be taught or suggested. As was
27 stated by the C.C.P.A. in In re Rosen; "The modification necessary to the primary reference in order

1 to achieve the patented design may not destroy fundamental characteristics of the primary reference."

2 In re Rosen, 673 F.2d 388, 391, 213 USPQ 347, 350 (C.C.P.A. 1982).

3 Regarding the rejection of claim 5, the King reference utilizes a standard automobile-type
4 engine which includes a standard fan/radiator cooling structure. Were the drive pulley to be
5 modified to include a fan structure as proposed by the examiner, the modified drive pulley fan
6 structure would still only operate to pull air through the radiator for cooling of engine coolant, and
7 would not cool the engine directly or cool the drive belt as presently claimed. It should be noted that
8 the fan structures in King and the German patents all are directed to cooling a radiator or a condenser
9 unit, and not to cooling the motor or drive belt of the device, and thus the structural design necessary
10 to perform the direct engine cooling is quite different in applicants' invention than that disclosed in
11 the cited prior art. Even though the Erickson patent does disclose a fan which cools the engine, the
12 Erickson patent is directed to a vacuum cleaner, a non-analogous art, and clearly has been cited only
13 based on a need to find an engine cooling fan as suggested by applicants' disclosure.

14 As an extension of this opinion, Applicants further would like to state that the modifications
15 of the prior art necessary to function as does applicants' invention are not found anywhere in the cited
16 prior art, but instead are only found in Applicants' disclosure, particularly in light of the currently
17 amended claims. The primary reason for using the drive pulley and only the drive pulley as a fan
18 is to direct external air onto the motor and drive belt to cool those functional elements of the pressure
19 washer, as is stated in amended claim 5. It is clear that the examiner has used the applicants'
20 invention as a "template" to draw together the various elements shown in the prior art in order to
21 reject applicants' claims, as a combination of three (3) patents has been cited to achieve the rejection.
22 As the Federal Circuit stated in In re Fitch; "The mere fact that the prior art may be modified to
23 reflect features of claimed invention does not make modification, and hence the claimed invention,
24 obvious unless the desirability of such modification is suggested by the prior art. It is impermissible
25 to use the claimed invention as an instruction manual or "template" to piece together the teachings
26 of the prior art so that the claimed invention is rendered obvious. This court has previously stated
27 that 'One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the

1 prior art to deprecate the claimed invention.'" In re Fitch, 23 USPQ2d 1780, 1783-4, *citing from In*

2 re Gordon, 733 F.2d at 902, 221 USPQ at 1127 and In re Fine, 837 F.2d at 1075, 5 USPQ2d at 1600.

3 Clearly, any suggestion to modify the prior art to include a drive pulley which is modified to include

4 fan blades which are operative to directly cool the motor and drive belt are features of applicants'

5 invention that are found only in the applicants' specification. Therefore it is seen that not only is

6 applicants' invention not disclosed in the prior art, but applicants' invention is not even fairly

7 suggested by the prior art. For all of these reasons, it is believed that the rejections of claims 1 and

8 5 have been overcome.

9 Claims 2-4 and 6-11 were rejected along with claims 1 and 5, but applicants wish to clarify

10 that they do not claim exclusive rights to the features defined in those claims independently, but

11 rather only in combination with the present invention as defined in claims 1 and 5. For the reasons

12 expressed above in connection with claims 1 and 5 and for the structural limitations added by these

13 claims, claims 2-4 and 6-11 are believed to be allowable with claims 1 and 5.

14 Applicant has invented a substantial improvement over the prior art, one which has not been

15 conceived previously, and one which provides a superior device for the direct cooling of the motor

16 and drive belt of a pressure washer. Excess heat significantly decreases the lifespan of pressure

17 washers, particularly the motor and drive belt of the pressure washer. The present invention provides

18 a novel and efficient solution to this problem, particularly in that it requires no additional parts or

19 structural elements to be added to the pressure washer for it to function to decrease the temperature

20 of the motor and drive belt. Nowhere in the prior art is such an elegant and straightforward solution

21 for the heat problem disclosed or suggested, and therefore it is believed that the present invention

22 provides a substantial improvement over those devices found in the prior art and therefore is

23 deserving of patent protection.

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This application is thus believed to be in condition for allowance of all claims remaining herein, and such action is respectfully requested.

Respectfully submitted,



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CERTIFICATE OF MAILING

I hereby certify that this Amendment for an IMPROVED COOLING FAN MECHANISM FOR A MOTOR-DRIVEN PRESSURE WASHER, Serial N° 10/774,637, was mailed by first class mail, postage prepaid, to Mail Stop Non-Fee Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 13th day of March, 2006.


Adam H. Jacobs